book-work composition ; others set up head-lines ; others make up the galleys ; others “prove” them.

*Old Style Printing.*

Within the last few years there has been an interesting revival of the old style of book printing. It owes its origin to Mr Whit­tingham of the Chiswick Press, who in 1843 was desirous of printing in appropriate type a work of fiction the diction of which was supposed to be that of the reign of Charles II. As the original “ old face ” matrices of the first Caslon had been preserved, a fount was cast from them, and on getting a proof with good ink, on good paper, from a modern press the impression was found to be far superior to specimens printed from the original fount. Since then the demand for old-faced characters has steadily increased, and all founders now supply imitations of the old types. Comparing the old face and the modern characters, the latter are more regular in size, lining, setting, and colour,—using these words in the technical sense of the founder ; they have finer strokes and serifs, and produce in the page a more regular and sparkling general effect. At the same time it may be conceded that legibility has been to a certain extent sacrificed to beauty and general effect. About 1882 an eminent French printer made a number of experiments to ascertain what it is that constitutes legibility in type, and found that people read with less fatigue according as the letters—(*a*) are rounder, (*b*) are more equal in thickness, (c) have shorter upstrokes, (*d*) are dissimilar to each other, and (*e*) are well proportioned to their own body. Drawings of letters from old books were visible and legible at a distance at which modern letters could not be distinguished. The revival has also brought about the re-introduction of antique head-pieces and tail-pieces, vignettes, and initial letters, which have been reproduced from old books by photography and typo- etching. For this kind of printing white paper has given place to toned, of a straw tint, which is often more agreeable to the eyes than the excessively bleached paper which was hitherto the fashion. Also hand-made instead of machine-made paper has to a large extent come into vogue. Its characteristic is the “ deckle edge ”, which distinguishes it from the clean-cut edge of machine papers, and is highly prized by some bibliophiles. When extreme verisimili­tude is required, this kind of printing is done on the blank leaves of real old books, some of which have been ruthlessly destroyed for this modern craze. On the whole, however, the revival of old style printing has been beneficial : it has encouraged printers to study the more artistic attributes of the productions of the great printers of the past, and has educated the public taste by presenting them with examples of the best kind of book-making.

*Printing Establishment.*

A large book-printing establishment contains many distinct de­partments, some of which have not been previously referred to and may here be summarily mentioned. The reading department, some­times called the *closet,* consists of a number of small apartments, each furnished with a desk, a couple of stools, and a shelf for books of reference, and having for its occupants the reader and his reading-boy. There is also the warehouse, where all the printed and unprinted sheets (or “white paper” as it is called, whatever its colour) are stored. Adjacent to this are folding, cutting, hot and cold pressing, drying, and other branches, each employing separate classes of artisans. Another department is the machine- room, where, arranged in long rows with an avenue between, are the various printing machines. The men in this part of the estab­lishment wear cotton vestments, covering all their other apparel, and caps, invariably made of paper, something like clerical birettas. The machine overseer has his box and keeps an account of the produce of each machine. Under him are the persons whose business it is to cut out overlays for the cut or illustrated formes. These men are in their way artists, for to them is attributable much of the beauty and perfection of working of each block that goes through their hands. They have by them three or four prints or “ pulls ” of the block, and their tools consist of scissors, paste, a sharp knife or two, and perhaps a razor-like blade set in a wooden handle. Their work is to deepen the shadows, raise the lights, lower the edges, and perform a hundred other offices for a block. Standing sentry over each machine is the machine minder ; under him are the takers-off and layers-on. The engine-room and boiler-house are close by, and higher up may be the hand-press-room,—provided these appliances are used. Here are the pressmen and their appren­tices. There is the storekeeper’s department, fitted up with shelves, racks, and drawers, for the orderly storage of type and materials. The plate-safe or plate-room is the repository of the stereo and electro plates, each plate being kept wrapped up in paper, with a distinctive index number marked thereon. There are also rooms for casting rollers, stereotyping rooms, drying rooms for paper, hydraulic press­ing rooms, sinks for washing formes, and lifts for conveying them from one department to another. There will possibly be several composing-rooms, such as the *’stab,* where all the men are paid on established weekly wages, the piece room, where they are paid by results, and the apprentices’ room. There may be rooms where particular jobs are done, especially if weekly periodicals are turned out, and the names of these designate the rooms. At the end of each room is the overseer. It is also a common practice for a number of men to form themselves into a kind of business partner­ship called a *companionship* or *'ship.* All the transactions of the compositor may be with his own *clicker,—*the workman who is selected to keep the accounts of the partnership. From him the compositor receives his portion of copy and the necessary direc­tions, and to him he gives the matter when it is composed. At the end of the week he “writes his bill,” delivers it to the clicker, and from the latter receives at pay time the wages he has earned. The clicker gets the matter proved or “pulled” by the proof­puller, who usually does nothing else but pull proofs. He will then send the proof with the copy to the overseer, and the overseer sends it to the reading department to be corrected. The proof, when corrected, is returned through the overseer (who retains the copy) to the clicker, and he gives it to the compositor who set it up. When the type is corrected a revise is pulled, which goes through the same hands to the overseer again ; and then it is de­spatched to the author, editor, or publisher. In a well-ordered composing-room strict silence is enjoined upon the workmen. Among the industrial pursuits there is none more monotonous and more exacting, none demanding more patience, sustained industry, and power of endurance than the compositor’s art. In a large newspaper office the quantity of types picked up in a few hours is marvellous. No better illustration of this could be given than the fact that several recent issues of the *Times* have consisted of three sheets or twenty-four pages, each page comprising six columns. In one of these issues 84⅔ of the 144 columns were filled with ad­vertisements, 2559 in number, set in extremely small type ; the remaining 59⅓ columns contained articles, reviews, letters, reports, and paragraphs. The total length of the column aggregate was 264 feet (62 more than the height of the London Monument). If the matter comprised in the paper, instead of being broken up into columns, had been set in one continuous line it would have reached one mile 950 yards. The number of separate types used in printing this issue was calculated at over two millions, and the quantity of printed matter was reckoned to be equivalent to that contained in two octavo volumes of 480 pages each. The literary and mechanical staff of a first-rate London daily newspaper, excluding casual re­porters and unattached writers on various subjects, aggregates about 300 persons.

*Bibliography.—*On the practice of the art and its auxiliary processes, see South­ward, *Dictionary of Typography* (3d ed., London, 1875, 8vo ; with the *Literary Almanack* by william Blades), and *Practical Printing: a Handbook of the Art of Typography* (3d ed., London, 1887, 2 vols., 8vo). This last is the fullest work on the subject in the English language, embracing composition, press work, stereotyping, and electrotyping, and the warehouse department of a printing office. Gould’s *Letterpress Printer* (2d ed., Middlesborough, 1880, 12mo) has a short introduction by Southward, giving a sketch of the origin and progress of the different typographical processes and appliances from the beginning. See also F. J. F. Wilson, *Typographic Printing Machines and Machine Printing* (3d ed., London, 1883, 8vo) ; *List of Technical Terms relating to Printing Machinery* (London, 1882,8vo) ; Noble, *Machine Printing* (London, 1883, 8vo) and *Principles and Practice of Colour Printing* (London, 1881, 8vo); and Wilson, *Stereotyping and Electrotyping* (London, 1880, 8vo). This last contains a history of stereo­typing and electrotyping by Southward. The best works in French are- Lefèvre, *Guide Pratique du Compositeur et de l' Imprimeur* (Paris, 1855-72, 8vo, two parts ; includes machine work, stereotyping, and electrotyping) ; Claye, *Manuel de l'Apprenti Compositeur* (3d ed., 12mo, Paris, 1883) ; and Monet, *Les Machines et Appareils Typographiques, suivi des Procédés d'Impression* (Paris, 1879, 8vo). The best German work, and one which from its completeness supersedes all others, is Waldow’s *Illustrierte Encyklopädie der graphischen Künste* (Leipsic, 1884, lar. 8vo), containing 2798 articles and 581 illustrations, with a list of Ger­man books on typography, &c.

*Periodicals.—*No trade or interest in the world has, perhaps, so many repre­sentatives in the press as printing. The journals which record its progress and describe its products are unrivalled in their excellent mechanical attri­butes, some equalling the highest class of book-work printing and using paper of the most luxurious description. Their literary character is usually worthy of their mechanical excellence, and they comprise an immense collection of facts and speculations on the subjects involved. They also attract a class of writers who in time become specialists and do the most valuable work in historical investigation. The *Printers’ Register* (monthly), begun in 1863, the oldest of the English printing trade journals, contains several valuable contributions by Mr William Blades, the biographer of Caxton, such as “Numismata Typo­graphica,” “Bibliotheca Typographica,” “Books and their Enemies," “The Inventor of the Steam Printing Press,” and “Early Type Specimen Books.” The *Paper and Printing Trades Journal* (quarterly), begun in 1872, is printed in old style fashion, and reproduces in tone as well as in manner some of the best examples of the French and Italian schools in head and tail pieces, vignettes, an<l ornamental initials. In France appear *L'Imprimerie* (semi- monthly)and the *Bulletin de l'Imprimerie* ; in Germany, *Archiv für Buchdrucker­kunst* (monthly) and *Journal für Buchdruckerkunst ;* in Italy *L'Arte della Stampa.* The United States has the *Inland Printer* (Chicago) and the *American Bookmaker* (New York). The fullest list of such journals, past and present, is Louis Mohr’s *Die periodische Fachpresse der Typographie* (Strasburg, 1879). There is also an extended list, with historical annotations, in Bigmore and Wyman’s *Bibliography of Printing. (J.* SO.)

TYR. See Æsir, vol. i. p. 211.

TYRE, the ancient צר Greek T*ύρoς*, the most famous of Phoenician cities, is now represented by the petty town of Súr, with about 5000 inhabitants, built round the har-